

Chapter 298

SUBDIVISION OF LAND

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[HISTORY: Adopted by the Township Council (now Township Committee) of the Township of Oxford 12-29-1978 by Ord. No. 78-18 (Ch. 83 of the 1974 Township Code). Amendments noted where applicable.]

GENERAL REFERENCES

Land use procedures – See Ch. 51.
Affordable housing – See Ch. 100.
Building and lot numbering – See Ch. 139.
Driveways – See Ch. 164.
Mobile home parks and campgrounds – See Ch. 213.
Off-tract improvements – See Ch. 226.
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ARTICLE I
General Provisions

§ 298-1. Short title.

This chapter shall be known as the "Oxford Township Land Subdivision Ordinance of 1978."

§ 298-2. Purposes and policy.

The Township Committee of Oxford Township declares that these rules, regulations and standards for guiding the subdivision of land for various purposes have been promulgated to provide for the orderly growth and coordinated development of the Township of Oxford and to assure and promote the comfort, convenience, safety, public health and general welfare of its people, and further that the approval of such subdivisions shall be administered in accordance with the following considerations:

- A. Conformance with the various parts of the Master Plan, Chapter 340, Zoning, and the Official Map.
- B. Recognition of a desirable relationship to the general land form, its topographic and geologic character, to natural drainage and surface water runoff and to the groundwater table.
- C. Recognition of desirable standards of subdivision design, including adequate provision for pedestrian and vehicular traffic, for surface water runoff and for suitable building sites for the land use contemplated.
- D. Provision for such facilities as are desirable adjuncts to the contemplated use, such as parks, recreation areas, school sites, firehouses and off-street parking.
- E. Preservation of such natural assets as ponds, streams, shrubs and trees.
- F. Provision of adequate utilities, services and circulation.

§ 298-3. Approving agency. ¹

The provisions of this chapter shall be administered by the Land Use Board of the Township of Oxford in accordance with N.J.S.A. 40:55D-1 et seq., its amendments and supplements thereto.

§ 298-4. Interpretation.

- A. In interpreting and applying the provisions of this chapter, they shall be held to be the minimum requirements adopted for the promotion of the public health, safety, morals, convenience and general welfare.

1. Editor's Note: Amended at time of adoption of Code (see Ch. 1, General Provisions, Art. I).

- B. Where the provisions of this chapter impose greater restrictions or higher standards than those of any statute, other ordinance or regulation, the provisions of this chapter shall govern. Where the provisions of any statute, other ordinance or regulation impose greater restrictions or higher standards than this chapter, the provisions of such statute, ordinance or regulation shall govern.

ARTICLE II Definitions

§ 298-5. Words and terms defined.

For the purpose of this chapter, the terms and words listed in this section shall have the meanings herein given. Terms and words not defined herein but defined in Chapter 340, Zoning, of the Code of the Township of Oxford shall have, for the purposes of this chapter, the meanings given them in Chapter 340 as the same now reads or may be amended. Terms and words not defined herein nor in Chapter 340 but defined in the Municipal Land Use Law² shall have, for the purposes of this chapter, the meanings given them in the Municipal Land Use Law and its amendments or supplements thereto. Terms and words not defined in any of the foregoing sources shall have the meanings established by common usage of the words, unless the context herein clearly indicates the contrary.

BOARD — The Land Use Board of the Township of Oxford.

CROSSWALK or WALKWAY — A right-of-way, dedicated to public use, to facilitate pedestrian access through a subdivision.

CUL-DE-SAC — A short dead-end street terminating in a vehicular turnaround area.

DRAINAGE RIGHT-OF-WAY — The lands required for the installation of stormwater sewers or drainage ditches or required along a natural stream or watercourse for preserving the channel and providing for the flow of water therein so as to safeguard the public against flood damage in accordance with N.J.S.A. 58:1A-1 et seq. [Amended 10-21-1993 by Ord. No. 93-11]

EASEMENT — A restriction established in a lot to permit the use of land by the public, a corporation or particular persons for specified uses.

IMPROVEMENT AND UTILITY PLAN — A plan or plans prepared subsequent to preliminary plat approval conforming to the requirements of § 298-11E.

LOT — The unit into which land is divided on a subdivision plat or deed, with the intention of offering such unit for sale, lease or separate use, either as an undeveloped or developed site, regardless of how it is conveyed. "Lot" shall also mean "parcel," "plot," "site" or any similar term.

MAINTENANCE GUARANTY — Any security which may be accepted under N.J.S.A. 40:55D-53, and its amendments and supplements thereto, for the maintenance of any improvements required.

2. Editor's Note: See N.J.S.A. 40:55D-1 et seq.

MASTER PLAN — A composite of one or more written or graphic proposals for the development of Oxford Township, as set forth pursuant to N.J.S.A. 40:55D-28, and its amendments and supplements thereto.

OFFICIAL MAP — The Official Map as adopted by the Township of Oxford pursuant to Article 5 of N.J.S.A. 40:55D-1 et seq., and its amendments and supplements thereto.

PERFORMANCE GUARANTY — Any security which may be accepted under N.J.S.A. 40:55D-53, and its amendments and supplements thereto, in lieu of a requirement that certain improvements be made before the Land Use Board approves the plat, including performance bonds, escrow agreements, cash not to exceed 10% of the total performance guaranty and other similar collateral or surety agreements.

PLAT, FINAL — The final map or maps for a portion or all of a subdivision previously shown on an approved preliminary plat, drawn and submitted in accordance with the requirements of § 298-11F.

PLAT, PRELIMINARY — The preliminary map or maps of a proposed subdivision, drawn and submitted in accordance with the requirements of § 298-11C and D.

PLAT, SKETCH — The sketch map or maps of a proposed subdivision, sufficiently accurate for subdivision discussion and classification, in accordance with the requirements of § 298-11B.

STREET —

A. Any street, avenue, boulevard, road, parkway, viaduct, drive or other way which is:

- (1) An existing state, county or Township roadway.
- (2) Shown upon a plat heretofore approved pursuant to law.
- (3) Approved by official action.
- (4) On a plat duly filed and recorded in the office of the County Clerk prior to the appointment of the Land Use Board and the grant to such Board of power to review plats.

B. The term "street" includes the land between street lines, whether improved or unimproved, and may comprise pavement, shoulders, gutters, curbs, sidewalks, parking areas and other areas within the street lines.

C. For the purpose of this chapter, Township-owned streets shall be classified as follows:

- (1) **MAJOR COLLECTORS** — Streets which carry traffic that is intracounty or intramunicipal in nature. Such streets connect minor collectors with arterials and highways.
- (2) **MINOR COLLECTORS** — Streets which provide service to and within subdivisions. Such streets connect the local streets with the major collectors or other minor collectors and may provide vehicular and pedestrian access to abutting properties.

- (3) **LOCAL STREETS** — Streets which provide vehicular and pedestrian access to abutting properties. Such streets connect with minor collectors.
- (4) **ALLEYS** — Minor ways which are used primarily for vehicular service access to the rear or side of properties otherwise abutting on a street.

SUBDIVISION —

A. The division of a lot, tract or parcel of land into two or more lots, tracts, parcels or other divisions of land for sale or development. The following shall not be considered subdivisions if no new streets are created: **[Amended 10-21-1993 by Ord. No. 93-11]**

- (1) Divisions of land found by the Land Use Board or Subdivision Committee thereof appointed by the Chairman to be for agricultural purposes where all resulting parcels are five acres or larger in size.
- (2) Divisions of property by testamentary or intestate provisions.
- (3) Divisions of property upon court order, including but not limited to judgments of foreclosure.
- (4) Consolidation of existing lots by deed or other recorded instrument.
- (5) The conveyance of one or more adjoining lots, tracts or parcels of land owned by the same person or persons, all of which are found and certified by the administrative officer to conform to the requirements of the municipal development regulations and are shown and designated as separate lots, tracts or parcels on the Tax Map or atlas of the Municipality.

B. "Subdivision" also includes resubdivision and, where appropriate to the context, relates to the process of subdividing or to the lands or territory divided.

SUBDIVISION COMMITTEE — A committee of at least three Land Use Board members appointed by the Chairman of the Board for the purpose of classifying subdivisions in accordance with the provisions of this chapter and of performing such other duties relating to land subdivision as may be delegated by the Board.

SUBDIVISION, MAJOR — All subdivisions not classified as minor subdivisions.

SUBDIVISION, MINOR — Any subdivision of land that does not involve:

- A. The creation of more than three lots fronting on an existing street within a five-year period.
- B. A planned development.
- C. Any new street or the extension of Township facilities.
- D. The extension of any off-tract improvement.
- E. An effect on development of the remainder of the parcel or adjoining property.

- F. A conflict with any provision or portion of the Master Plan, Official Map, Chapter 340, Zoning, or this chapter.

ARTICLE III General Procedures

§ 298-6. Taxes, assessments and ownership disclosure.

- A. As a condition for any stage of subdivision approval (sketch, preliminary or final), the developer shall submit proof from the Oxford Township Tax Collector or other designated official that no taxes or assessments for local improvements are due or delinquent on the property for which the site plan application is made.
- B. As a condition of subdivision approval of a tract into six or more lots, or of applying for a variance to construct a multiple dwelling of 25 or more family units, the applicant, where it is a corporation or partnership, shall submit as part of its application a list of all stockholders or individual partners owning at least 10% of its stock or at least 10% of the interest in the partnership, as the case may be, pursuant to N.J.S.A. 40:55D-48.1, plus, pursuant to N.J.S.A. 40:55D-48.2, if applicable, a list of all stockholders or individual partners owning at least 10% of the stock or partnership interest in a corporation or partnership subject to disclosure pursuant to N.J.S.A. 40:55D-48.1. **[Amended 10-21-1993 by Ord. No. 93-11]**

§ 298-7. Sketch plat and minor subdivision approval; taxes and assessments.

- A. Introduction.
- (1) All developers applying for a minor subdivision shall submit a sketch plat in accordance with the requirements of this section.
 - (2) All developers other than in Subsection A(1) above are encouraged to submit a sketch plat prior to submitting an application for preliminary approval pursuant to the provisions of § 298-8 for the purpose of assuring coordination with the Comprehensive Plan.
 - (3) All sketch plats shall be prepared in accordance with the requirements of § 298-11B of this chapter.
- B. Procedure.
- (1) Submission of sketch plat.
 - (a) Nine paper prints of the sketch plat, together with four copies of a completed application and a filing fee as required in Schedule I, Fees, located at the end of Chapter 51, Land Use Procedures, shall be submitted to the Township Engineer, who shall review the application to determine if it is complete. No subdivision shall be classified until a complete application has been

submitted. Upon receipt of a complete application, the Township Engineer shall forward eight copies to the Secretary of the Land Use Board.

- (b) The Secretary of the Land Use Board shall distribute the copies as follows:

- [1] County Planning Board: five copies.
- [2] Chairman of the Board: one copy.
- [3] Minor Subdivision Committee: one copy.
- [4] Land Use Board Attorney: one copy.

- (2) When classified as a minor subdivision by unanimous action of the Subdivision Committee and the Township Engineer:

- (a) The sketch plat original shall be marked and classified as a minor subdivision by the Subdivision Committee.
- (b) Minor subdivision approval shall be granted or denied within 45 days of the date of submission of a complete application to the Township Engineer or within such further time as may be consented to by the applicant or as provided by the Municipal Land Use Law. Failure of the Board to act within such time shall constitute minor subdivision approval.
- (c) Whenever review or approval of the application by the County Planning Board is required, the Board shall condition any approval that it grants upon timely receipt of a favorable report on the application by the County Planning Board or approval by the County Planning Board by its failure to report thereon within the required time period.
- (d) Upon signed approval by the Warren County Planning Board, the applicant shall submit a drawing, complying with the provisions of the Map Filing Law³ and complying with the provisions of § 298-11F herein, or a deed and six copies thereof.
- (e) If a map is submitted, the procedure for distribution as provided in Subsection B(1)(b) of this section shall be followed.
- (f) If a deed is submitted, it shall be stamped "approved" and signed by the Chairman and the Secretary of the Board and distributed with copies of the plat as follows:
 - [1] Land Use Board files: one copy.
 - [2] Tax Assessor: one copy.
 - [3] Construction Official: one copy.
 - [4] Township Engineer: one copy.

3. Editor's Note See N.J.S.A. 46:23-9.9 et seq.

- (g) Approval of a minor subdivision shall expire 190 days from the date of municipal approval unless, within such period, a plat in conformity with such approval and the provisions of the Map Filing Law, or a deed clearly describing the minor subdivision, is filed by the developer with the county recording officer, the Municipal Engineer and the Municipal Tax Assessor.
- (h) The Board or Subdivision Committee may condition such approval on terms ensuring the provision of improvements pursuant to the terms of this chapter or any other ordinance so requiring such improvements.

§ 298-8. Preliminary plat approval.

A. Introduction.

- (1) A preliminary plat and the supporting documents for a proposed subdivision constitute the material to be officially submitted to the Board. They show the general design of the subdivision and its public improvements so that the Board can indicate its approval or disapproval of the subdivision prior to the time that the final plat, including the design and detailing of the public improvements and utilities, is completed. Approval of the preliminary plat does not constitute an approval of the final plat, nor should it be considered a valid basis for the construction of site improvements nor for other commitments which depend upon its design characteristics.
- (2) When revision of a preliminary plat is made, six prints of the revised preliminary plat shall be filed and distributed upon resubmission, so that the files of the Board and other Township officials will be current.
- (3) The preliminary plat shall serve as a key map to subdivisions subsequently laid out in sections on separate final plats.
- (4) All preliminary plats shall be prepared in accordance with the requirements of § 298-11.

B. Procedures.

- (1) Procedure to be followed by the applicant. The preliminary plat shall be submitted to the Township Engineer. The submission shall include the following:
 - (a) Application for subdivision plat approval: eight copies. **[Amended 10-21-1993 by Ord. No. 93-11]**
 - (b) The preliminary plat: eight paper prints.
 - (c) A filing fee as provided in Schedule I, Fees, located at the end of Chapter 51, Land Use Procedures.
- (2) Procedure to be followed by the Township Engineer and Board Secretary.

- (a) The Township Engineer shall review the submittal to determine if it is complete and shall transmit all fees to the Township Clerk and: **[Amended 10-21-1993 by Ord. No. 93-11]**
 - [1] Inform the applicant of the deficiencies in the application; or
 - [2] Notify the Secretary of the Board of the filing date of the preliminary plat and the date that the application is deemed to be properly submitted.
 - (b) Upon determination of a complete application, the Township Engineer shall retain one complete set of the preliminary submission and forward the remainder to the Board Secretary, who shall distribute them as follows:
 - [1] Warren County Planning Board: three copies.
 - [2] Board files: one copy.
 - [3] Township Clerk (for public inspection): one copy.
 - [4] Board Chairman: one copy.
 - [5] Board Attorney: one copy.
 - (c) Upon submission to the Township Engineer of a complete application for a subdivision of 10 or fewer lots, the Board shall grant or deny preliminary approval within 45 days of the date of such submission or within such further time as may be consented to by the developer or as provided by the Municipal Land Use Law. Upon submission of a complete application for subdivision of more than 10 lots, the Board shall grant or deny preliminary approval within 95 days of the date of submission or within such further time as may be consented to by the developer, or as provided by the Municipal Land Use Law. Otherwise, the Board shall be deemed to have granted preliminary approval.
- (3) Notification. Upon determination of the filing of a complete application as provided in Subsection B(2), the applicant shall cause notice of a public hearing on the preliminary plat submission to be published in the official newspaper of the Township at least 10 days prior to the date set for a hearing and shall give notice of the hearing on the application pursuant to the requirements of the Municipal Land Use Law, N.J.S.A. 40:55D-12, and its amendments and supplements thereto. The contents of said notice shall be as required by N.J.S.A. 40:55D-11, and any amendments and supplements thereto. The subdivider shall furnish the Board with the returned receipts. **[Amended 10-21-1993 by Ord. No. 93-11]**
- (4) Procedure for approval.
- (a) A hearing shall be scheduled by the Board Secretary and held not less than 10 days prior to the date the Board is required to act pursuant to the terms of this chapter and the Municipal Land Use Law, including any extensions of

time as may be consented to by the applicant. The applicant shall be advised of the hearing date at least 20 days prior thereto.

(b) Reports.

[1] The Township Engineer shall prepare and submit a report of findings for Board consideration and action prior to the hearing.

[2] Whenever review or approval of the application by the County Planning Board is required, the Board shall condition any approval that it grants upon timely receipt of a favorable report on the application by the County Planning Board or approval by the County Planning Board by its failure to report thereon within the required time period.

(c) A copy of the action taken by the Board shall be forwarded to the applicant, or his representative who appeared for him, within 10 days of the hearing, to the Township Clerk and to the Township Engineer. Each decision shall be in writing and shall include findings of fact and conclusions based thereon.

(d) If the Board approves the preliminary plat and all conditions have been met, the Chairman of the Board shall sign the preliminary plat original with a notation that it has received approval, and it shall then be returned to the applicant for compliance with final plat approval requirements as provided in this chapter; provided, however, that, prior to the return of the original tracing, the applicant shall have provided the Township Engineer with a complete set of Mylar or other suitable base reproducibles of the preliminary plat.

C. Expiration of preliminary approval.

(1) Board approval of the preliminary plat shall expire three years after the date of such formal action, except that, in cases of 50 acres or more, extensions may be granted pursuant to N.J.S.A. 40:55D-49d, and its amendments and supplements thereto.

(2) Board approval of the preliminary plat confers upon the subdivision applicant the following rights:

(a) That the general terms and conditions under which the approval was granted will not be changed.

(b) That the applicant may submit, on or before the expiration date, the whole or parts of the final plat for approval.

§ 298-9. Final plat approval.

A. Improvements prior to final approval. Before consideration of a final subdivision plat, the subdivider shall have installed the improvements required under the provisions of this chapter and Chapter 294, Article I, Road Acceptance Specifications, and Chapter 340, Zoning, except sidewalks and final paving course of all streets and roads. Prior to the

start of any construction of such improvements, the subdivider shall submit for approval by the Township Engineer and the Board the following:

- (1) Improvement and utility plan prepared in accordance with § 298-11.
- (2) Inspection fees in accordance with Schedule I, Fees, located at the end of Chapter 51, Land Use Procedures.
- (3) Copies of all permits and approvals required for construction of improvements.
- (4) A performance guaranty in accordance with § 298-15.
- (5) A stormwater management plan, pursuant to Chapter 285, Stormwater Management. **[Added 10-21-1993 by Ord. No. 93-11⁴]**

B. Introduction.

- (1) A final plat and supporting drawings and documents for a proposed subdivision constitute the complete development of the subdivision proposal and include the recommendations resulting from the Board review of the preliminary plat, as well as the improvements and utility plans. After public hearing and approval by the Board, this complete submission, accompanied by the performance guaranty as approved by the Township Committee for those improvements which are not required to be completed prior to consideration of the final subdivision plat, becomes the basis for the construction of the uncompleted portions of the subdivision. The plat itself must be recorded at the County Clerk's office to have legal status. An unrecorded plat is not a valid basis for completion of site improvements or other commitments.
- (2) The final plat itself shall be an accurate survey record of the properties resulting from the subdivision.
- (3) All final plats shall be prepared in accordance with the requirements of § 298-11.

C. Procedures.

- (1) Procedure to be followed by the applicant.
 - (a) The final plat shall be submitted to the Township Engineer.
 - (b) The submission shall include the following:
 - [1] Nine copies of the application for final plat approval.
 - [2] Nine paper prints of the final plat.
 - [3] Evidence of the completion of all improvements, except sidewalks and final paving course of all streets.
 - [4] Five copies of a letter, in appropriate cases, directed to the Chairman of the Board, signed by a responsible official of the State or County

4. Editor's Note: Amended at time of adoption of Code (see Ch. 1, General Provisions, Art. I).

Highway Department, approving construction on state or county rights-of-way.

[5] Five copies of deeds of dedication for all properties, including street rights-of-way, which are being offered to the Township for dedication.

[6] Filing fees as required by Schedule I, Fees, located at the end of Chapter 51, Land Use Procedures.

(2) Procedure to be followed by the Township Engineer and Board Secretary.

(a) The Township Engineer shall review the submittal to determine if it is complete and shall transmit all fees to the Township Clerk and: **[Amended 10-21-1993 by Ord. No. 93-11]**

[1] Inform the applicant of any deficiencies in the application; or

[2] Notify the Secretary of the Board of the filing date of the final plat and the date that the application is deemed to be properly submitted.

(b) Upon determination of a complete application, the Township Engineer shall retain one copy of the complete application and forward the remainder to the Board Secretary, who shall distribute them as follows:

[1] Warren County Planning Board: three copies of plat.

[2] Board files: one copy.

[3] Township Clerk (for public inspection): one copy of plat.

[4] Board Chairman: one copy.

[5] Board Attorney: one copy.

D. Notification. Upon determination of filing of a complete application pursuant to Subsection C(2), the applicant shall cause notice of a public hearing on the final plat submission to be published in the official newspaper of the Township at least 10 days prior to such hearing.

E. Procedure for approval.

(1) A hearing shall be scheduled by the Board Secretary and held not less than 10 days prior to the date the Board is required to act pursuant to the terms of this chapter and the Municipal Land Use Law, including any extensions as may be consented to by the applicant. The Secretary shall advise the applicant of the meeting date.

(2) The Township Engineer shall prepare and submit a report of findings for Board consideration and action prior to the hearing.

(3) Final approval shall be granted or denied within 45 days after submission of a complete application to the Township Engineer or within such further time as may be consented to by the applicant or as provided by the Municipal Land Use Law. Failure to act within such time shall constitute approval.

- (4) Whenever review or approval of the application by the County Planning Board is required, the Board shall condition any approval that it grants upon timely receipt of a favorable report on the application by the County Planning Board or approval by the County Planning Board by its failure to report thereon within the required time period.
- (5) If the plat is approved, the subdivider shall carry out the following steps prior to obtaining the Chairman's signature of approval:
 - (a) Make all required corrections to the satisfaction of the Board.
- (6) The Chairman of the Board shall sign and date the final plat upon the following authorization:
 - (a) A resolution by the Board authorizing the signature.
 - (b) A compliance report from the Township Engineer.
 - (c) A notification from the Township Attorney that the required performance guaranty is approved.
- (7) The subdivider shall prepare and deliver to the Board Secretary prints of the corrected and signed final plat and drawings as follows:
 - (a) Six paper prints.
 - (b) One opaque cloth print.
 - (c) Two Mylar tracings (four-mil thicknesses photographically reproduced).
- (8) The Board Secretary shall distribute the final plat drawings in the following manner:
 - (a) The Secretary shall retain one Mylar tracing and two paper prints.
 - (b) To the Township Engineer: one paper print of the plat and one Mylar tracing.
 - (c) To the Township Construction Official: one paper print.
 - (d) To the Township Tax Assessor: one paper print.
 - (e) To the County Planning Board: one paper print.
 - (f) To the Township Clerk: one opaque cloth print for Township records.
- (9) The subdivider shall, within 95 days from the date of signed approval, file the following with the Warren County Clerk, unless extended:
 - (a) The signed original tracing.
 - (b) One opaque cloth print.
- (10) Board approval of a final plat shall not be deemed to be acceptance by the Township of any street or other land shown or offered for dedication to public use.

F. Expiration of approval.

- (1) Approval of a final plat shall expire 95 days after the date of the Board resolution authorizing the Chairman to sign the drawings, unless the applicant shall have filed, within that time period, a copy of said plat with the county recording officer and delivered to the Township Clerk a certification of such filing.
- (2) Upon application by the subdivider showing good cause, the Board may make an extension, not to exceed 190 days, of the approval; provided, however, that the plat is revised according to any change in regulations or ordinance applicable to the plat subsequent to the first resolution.
- (3) Expiration of an approval shall mean that any further action will require a new filing fee, as well as a review of all previous findings.
- (4) No final plat shall be accepted for filing by the County Clerk unless it has been duly approved by the Board and signed by the Chairman.

§ 298-10. Completion of improvements.

After completing the construction of the public improvements and prior to the termination of the guaranty period, the subdivider shall prepare a set of the approved improvement and utility plan and profiles (Mylar reproductions), amended to indicate as-constructed information, and apply to the Township Engineer for a final inspection of the work as provided in § 298-14.

ARTICLE IV
Plat Details; Design Requirements

§ 298-11. Plan and plat requirements.

A. Common requirements.

- (1) All plats, whether sketch, preliminary or final, shall be submitted on one of the following drawing sheet sizes:
 - (a) Eight and one-half by 13 inches.
 - (b) Fifteen by 21 inches.
 - (c) Twenty-four by 36 inches.
 - (d) Thirty by 42 inches.
- (2) All improvement and utility plans shall be 24 by 36 inches.
- (3) Drawings shall be prepared at scales not to exceed the following, except as provided herein:

- (a) Sketch plat: one inch equals 100 feet.
- (b) All other drawings: one inch equals 50 feet.
- (4) Title block shall include the following information:
 - (a) Name of the subdivision.
 - (b) Name, address, membership or license of the professional person who prepared the drawings.
 - (c) The term "sketch plat," "preliminary plat," "improvement and utility plans" or "final plat," as applicable.
 - (d) Date of the drawing.
 - (e) Drawing reference number.
 - (f) Section number of the section being subdivided, if applicable.
 - (g) Scale of the drawing.
- (5) Drawings shall also include the following:
 - (a) North arrow and reference meridian.
 - (b) Date of original drawing and date and nature of all subsequent revisions.

B. Sketch plat requirements.

- (1) Minor subdivisions. The sketch plat for a minor subdivision shall include the following for both newly created and remaining lots:
 - (a) Key map showing the subdivision site and its relation to the surrounding area, streets and highways and zone district boundaries.
 - (b) Boundary survey data, Tax Map data or some other similarly accurate base.
 - (c) Topographic survey conditions of property and surrounding area within 200 feet, except that within a developed area only structures on the adjoining lots need be shown. This shall include contours based on United States Coast and Geodetic Survey quadrangle maps. The minimum interval shall be 20 feet.
 - (d) Existing and proposed drainage features of property and surrounding area within 200 feet (e.g., culverts, marshes, water areas, streams and leads subject to occasional flooding).
 - (e) Special site conditions (e.g., easements, power lines and structures).
 - (f) The location of that portion which is to be subdivided in relation to the entire tract.
 - (g) Tax sheet, block and lot number.

- (h) The name of the owner and all adjoining property owners as disclosed by the most recent Municipal tax records.
 - (i) All existing and proposed streets or roads within or adjoining the proposed subdivision, with the right-of-way widths clearly indicated.
 - (j) All proposed lot lines and lot lines to be eliminated by the proposed subdivision shall be clearly indicated.
 - (k) All existing, proposed and required setback dimensions.
 - (l) Acreage of the entire tract and the area being subdivided.
 - (m) Name and address of owner, subdivider and person preparing plat.
 - (n) The sketch plat title shall include the term "sketch plat."
 - (o) Documentation of feasibility of an adequate method of sewage disposal.
- (2) Major subdivisions.
- (a) The sketch plat for a major subdivision shall include:
 - [1] All the data required for a minor subdivision sketch plat.
 - [2] Contours at an interval of five feet, based on United States Geological Survey datum, for the property to be subdivided and the surrounding area within 200 feet.
 - [3] Statement assessing the relationship to the Comprehensive Plan for the area.
 - [4] Proposed street, block and lot layout with reference to surrounding properties and street pattern.
 - (b) The subdivider shall be guided by the Township Engineer in fixing the appropriate scale for the sketch plat.
- C. Preliminary plat, improvement and utility plans, and final plat common requirements. In addition to the requirements hereafter set forth, the preliminary plat, improvement and utility plans and the final plat shall conform to the following:
- (1) The drawings shall be prepared by a professional engineer licensed to practice in New Jersey, except as follows:
 - (a) The boundary survey and the final plat shall be prepared by a land surveyor licensed to practice in New Jersey.
 - (b) Architectural drawings shall be prepared by an architect licensed to practice in New Jersey.

- (c) Landscape drawings, except street tree locations and types, shall be prepared by a practicing landscape architect, licensed architect or professional engineer.
 - (2) The title sheet or final plat shall show the following additional data:
 - (a) Name and address of the subdivider.
 - (b) Name and address of the owner or owners of record.
 - (c) Total acreage of the entire tract.
 - (d) Total acreage of the section being subdivided, if applicable.
 - (e) Total acreage of each zone district within the tract.
 - (f) Total number of proposed lots for the entire tract and for the section being subdivided.
 - (3) There shall be a key map at and containing a graphic scale equal to the Oxford Township Tax Map or Official Map, which shall show the following:
 - (a) Relationship to the primary and secondary highway system and main intersections.
 - (b) Boundary lines, building zone districts, special districts and municipal areas.
 - (c) Subdivision streets and blocks to scale.
 - (d) Map match lines as needed, when there are two or more drawings to show the complete subdivision.
 - (e) The plat area being submitted for approval shall be shaded if it is only one section of the entire subdivision.
 - (f) Subdivision boundary line (heavy solid lines) and survey data.
 - (g) Boundaries of adjacent properties and property owners' names, provided that adjacent properties which are a part of a recorded subdivision plat may be identified by the subdivision name.
- D. Preliminary plat data. The preliminary plat shall contain the following additional data:
- (1) Survey data.
 - (a) The plat shall be based on a boundary survey which shall be based on a field traverse having an error of closure of not less than one part in 10,000 parts. A certification as to compliance with this requirement shall be provided by the applicant's engineer.
 - (b) Topographic contours at two-foot intervals referred to the United States Coast and Geodetic Survey data of mean sea level, provided that smaller or larger intervals, when advisable due to the terrain, may be used after approval by

the Township Engineer. The contours shall extend 200 feet beyond the subdivision boundary line.

- (2) Existing site conditions to be indicated.
 - (a) Street rights-of-way on the subdivision and within 500 feet of its boundaries.
 - [1] Name.
 - [2] Location and width.
 - [3] Existing streets intersecting with streets proposed in development.
 - [4] Center-line elevations shown on a profile with elevations indicated at fifty-foot intervals.
 - [5] Typical cross section.
 - (b) Other rights-of-way and easements on the subdivision and within 500 feet of its boundaries.
 - [1] Identification and description.
 - [2] Location and width.
 - [3] Restrictions on use, if any.
 - (c) Drainage structures on the subdivision and within 500 feet of its boundaries to be shown on plan and profile.
 - [1] Type of structure.
 - [2] Location, invert elevations, gradients and sizes of all pipe and all other structures, where applicable.
 - [3] Capacity of all storm drainage facilities.
 - (d) Location, size and capacity of other utility structures, such as water and gas mains and power lines, on the subdivision and within 500 feet of its boundaries.
 - (e) Marshes, ponds, streams and land subject to periodic or occasional flooding or similar conditions on the subdivision and within 500 feet of its boundaries.
 - [1] Location and area covered, indicating apparent high-water level.
 - [2] Water level on date of survey, and survey date.
 - [3] Maximum depth of water at critical points.
 - [4] Capacity of all streams.
 - (f) Test holes. Locations shall be reviewed by the Township Engineer prior to digging thereof.

- [1] Test holes shall be dug at the rate of one test hole per three acres of land to be subdivided, to a depth of 12 feet or bedrock, whichever is less, for the purpose of determining bedrock elevations, soil horizons and groundwater depth.
 - [2] The location of each test hole shall be shown on the plat with a graphical representation of the depth to bedrock, soil horizons and groundwater, including elevations of bedrock and groundwater.
 - (g) Township or other public lands, including lands designated as parks, open spaces or for some other public use.
 - (h) Buildings and other structures located on the subdivision and within 200 feet of its boundaries.
 - (i) Trees over four inches in diameter, measured at six feet above the existing grade, located on the subdivision, provided that where trees are in mass only, the limits thereof need be shown; except that, if the trees are proposed to be removed, trees over nine inches in diameter shall also be shown.
- (3) Proposed site conditions to be indicated.
- (a) Streets.
 - [1] Name (to be checked with the Township Engineer prior to submission).
 - [2] Right-of-way width.
 - [3] Tentative center-line elevations at fifty-foot intervals shown on the profile sheet.
 - [4] Tentative center-line gradient shown in percent of slope and vertical curve data.
 - [5] Tentative cross sections.
 - [6] High points and low points shown on plan and profiles with elevation thereof shown on profiles.
 - [7] An analysis of allowable sight distance at all intersections and an indication thereof on the profile, including "K" value.
 - (b) Lot layout.
 - [1] Lot lines and dimensions, to the nearest foot, and lot area, in square feet.
 - [2] Building setback lines (dashed) and their dimensions from the lot line.
 - [3] Easements and restricted areas, with notation as to purpose or restriction.

- [4] Identification of lots or parcels for special uses, whether they are to be offered for dedication or not.
 - [5] Future layout for all reserved parcels, in broken lines, in conformance with existing zoning regulations.
 - [6] Location of sight triangles as required by Subsection D(3)(a)[7] of this section.
- (c) Preliminary stormwater drainage system in plan and profile.
- [1] All proposed drainage facilities with sizes and gradients in plan and profile.
 - [2] Outline of watersheds tributary to drainage structures and their approximate area, in acres, including those which extend beyond the boundaries of the subdivision.
 - [3] Preliminary design computations.
- (d) Existing trees to remain standing, located on the subdivision.
- (e) Proposed sanitary sewer system in plan and profile.
- [1] All proposed sanitary sewers, with sizes and gradients.
 - [2] All proposed pumping stations, force mains and other special facilities.
 - [3] All engineer's reports in compliance with the requirements of the New Jersey Department of Environmental Protection.
- (f) The tentative location and size of all other proposed utilities.
- (g) The estimated average number of automobiles and number and size or type of trucks or buses that will enter and leave the site each day and during peak hours.
- (h) Tentative grading plan, indicated by contours at four-foot intervals or other intervals as may be required by the slope and nature of the final grading.
- (i) The limits of the final plat sections, if the subdivision is to be developed in more than one section, and the anticipated date of development on each section.
- (j) Impact on community services.
- [1] An analysis of the impact of the proposed subdivision on community services, including but not necessarily limited to the following:
 - [a] Sanitary sewer system.
 - [b] Storm drainage system.
 - [c] Street and highway system.

- [d] Schools.
 - [e] Police and fire services.
 - [f] Recreation facilities.
 - [g] Public utilities, such as water, telephone, electric and cable television. A letter from the public utilities stating their ability to accept the additional required services may be considered as compliance.
 - [h] Fiscal impact on municipal and educational facilities.
 - [i] Other such services as the Board may deem appropriate.
 - [2] The analysis shall assess the impact of the subdivision in its entirety and by section and shall compare them to the available capacity. It shall also include the basis for each projection.
 - (k) Any other data the Board may deem appropriate.
- E. Improvement and utility plans. The improvement and utility plans shall contain the following additional data:
- (1) All existing site conditions as required in Subsection D(2) of this section.
 - (2) Street rights-of-way and widenings of street rights-of-way.
 - (a) Name.
 - (b) Location.
 - (c) Width.
 - (d) Notation on widenings where an offer of dedication is being made.
 - (3) Other rights-of-way and easements.
 - (a) Identification and description.
 - (b) Location and width, with dimensions necessary for description.
 - (c) Restrictions on use, if any.
 - (4) Proposed lot layouts.
 - (a) Number identification by a lot and block system as assigned by the Township Tax Assessor. Application for assignment of numbers shall be made through the Township Engineer.
 - (b) Lot lines, with accurate dimensions to the nearest hundredth of a foot.
 - (c) Lot area, to the nearest square foot.
 - (d) Building setback lines, with dimensions.

- (e) Special parcels.
 - [1] Description of proposed action and use, including a note where an offer of dedication is being made.
 - [2] Boundary lines, with accurate dimensions to the nearest hundredth of a foot.
- (5) Street center-line gradients, in percent.
- (6) Street center-line grade elevations at fifty-foot intervals.
- (7) Drainage system requirements.
 - (a) Complete drainage system plan for the entire subdivision, with appropriate development stages for each of the final plat sections, shall be shown graphically with all existing drainage features which are to be incorporated, properly identified as "existing."
 - (b) Boundaries of stormwater runoff watersheds for each drainage structure and their area in acres.
 - (c) All proposed surface drainage structures (e.g., ditches, channels, etc.).
 - (d) All appropriate details and dimensions necessary to explain clearly the proposed construction, including type of construction, material, size, pitch and invert elevations, among other things, as may be necessary.
 - (e) Profiles of all proposed drainage system components.
 - (f) Final design computations.
- (8) Sanitary waste disposal system.
 - (a) A sanitary sewer system design shall be indicated in all cases where public sewer connections exist or are proposed, including locations of house connections.
 - (b) A notation on the profile of the minimum water and air retention time for exfiltration tests for each line within the subdivision.
 - (c) If on-site disposal is proposed, typical lot layout, indicating location of system with reference to house and water supply; and a detailed drawing of proposed sanitary waste disposal facility.
- (9) Water supply and distribution.
 - (a) Location of source on property or, where piped in, the size of the supply main.
 - (b) Location and size of all distribution mains.
 - (c) Location of fire hydrants.

- (d) Location of all control valves.
- (10) Electric and telephone and other utility systems.
 - (a) Location of all service routes for both aerial and underground cables and of all poles.
 - (b) Location of all special facilities.
- (11) All off-tract improvements to be constructed as part of the subdivision.
- (12) A contour grading plan for all areas to be disturbed, showing both existing and proposed grade at two-foot intervals and smaller intervals if necessary.
- (13) Locations of all trees and natural features to be removed and preserved.
- (14) Location of all improvements, including but not limited to the following:
 - (a) Curbs and gutters.
 - (b) Sidewalks.
 - (c) Driveway aprons and drop curbs.
 - (d) Street signs.
 - (e) Streetlighting.
 - (f) Street and shade trees.
- (15) Profile drawing requirements.
 - (a) Drawings shall be made on standard profile paper with the following scales:
 - [1] Horizontal scale: one inch equals 50 feet.
 - [2] Vertical scale: one inch equals five feet.
 - (b) All profiles shall show the existing natural grades, the typical cross section of existing or proposed roadways, the center lines of intersecting roadways and a system of survey stations.
 - (c) The center-line profile of all proposed roadways, with dimensioning on vertical curves, and notation as to gradient, with elevations at fifty-foot stations and at all high and low points.
 - (d) The invert profile and location of all sanitary and storm drainage structures and pipes in street rights-of-way and in easements.
- (16) Detailed grading plans of each intersection, showing elevations at ten-foot intervals at the following points:
 - (a) Center lines for 100 feet on either side of the center line at intersections.
 - (b) Edge of traveled way of through street.

- (c) Gutters of both through street and intersecting street.
- (17) An estimate of quantities of each construction item, broken down into the following categories:
 - (a) Improvements dedicated to the Municipality or, in the case of privately owned streets, improvements which would normally be dedicated to the Municipality.
 - (b) Improvements owned by public utilities.
 - (c) Other site improvements, exclusive of dwellings, septic systems and private wells.
 - (d) Improvements to be made off-tract.
- (18) Copies of all applications and supporting data for permits issued by other agencies and copies of the permits.
- (19) Construction details of all improvements other than public utilities.
- (20) Other data as may be required by the Board.
- F. Final plat. The final plat must be drawn in conformance with the provisions of the Map Filing Law and contain all the requirements for drainage easements, encroachment line sight triangles at intersections and new or additional right-of-way easements.

§ 298-12. Subdivision design requirements.

- A. Purpose. These design standards are a guide to development so that Oxford Township will in the future be a coordinated, well-planned community of good quality, with provision for desirable services and circulation facilities.
- B. Land use standards.
 - (1) Proposed land uses shall conform to Chapter 340, Zoning, the Master Plan, the Official Map and the provisions of this chapter.
 - (2) Land reserved from subdivision shall be a useful dimension for development in the future in accordance with current zoning.
 - (3) Subdivision designs shall indicate consideration for suitable protection of different types of land uses and the segregation of vehicular and pedestrian traffic incompatible with particular uses.
 - (4) Desirable sites shall be provided for public and semipublic land uses, such as schools, firehouses, recreation sites and other community uses, as provided in N.J.S.A. 40:55D-44.
- C. Street and highway standards.

- (1) The street and highway layout shall conform to the Master Plan and the Official Map and shall provide appropriately located street taps or stub streets to adjacent areas.
- (2) Where a higher level of government requires a wider street, that standard shall be met. Otherwise, the following shall be minimum widths:

Street Class	Right-of-Way (feet)	Average Daily Traffic Volume
Major collectors	80	Above 8,000
Minor collectors	60	800 - 8,000
Locals	50	Less than 800
Alleys (not permitted)		

- (3) The street pattern within a subdivision shall be orderly.
- (4) Local streets shall be laid out so that their use for through traffic will be discouraged. Particular attention should be given to eliminating possible bypasses around traffic signals and major intersections.
- (5) Block dimensions.
 - (a) Maximum length shall be 2,000 feet.
 - (b) Minimum width shall relate to the zoning district requirements for lot sizes and yards and generally shall provide for two tiers of lots.
 - (c) Special attention shall be given to blocks in industrial and business districts to provide for access to the lots and for parking and truck delivery.
- (6) Culs-de-sac.
 - (a) Maximum length shall be 1,500 feet or adequate to accommodate 25 lots, whichever is less.
 - (b) Minimum radius for the right-of-way at the turnaround shall be 60 feet, and the outside curb radius shall be 50 feet.
 - (c) Culs-de-sac shall be placed at the end of all stub or otherwise dead-end streets, whether or not the street is to be extended as part of a future subdivision or section thereof.
 - (d) Where a cul-de-sac is of a temporary nature, provision shall be made for future extensions of the street and reversion of the excess right-of-way to the adjoining properties.
- (7) Intersections.

- (a) No more than two streets shall intersect or meet at any one point.
- (b) Streets shall intersect either perpendicularly or radially, except where, due to peculiar existing conditions, this cannot be achieved, in which case they shall intersect or meet at an angle of not less than 75° nor more than 105°.
- (c) The center lines of all streets entering an intersection shall pass through a single point.
- (d) Intersections on local and minor collector streets shall be spaced a minimum of 150 feet apart, measured from the points of intersection of the center lines.
- (e) Intersections on other than local and minor collector streets shall be spaced a minimum of 800 feet apart, measured from the points of intersection of the center lines.

D. Preservation of natural environment.

- (1) Subdivision design shall preserve, insofar as is possible, the natural terrain and natural drainage lines.
- (2) A conscious effort shall be made to preserve all worthwhile trees and shrubs which exist on a site. Such features may well be suggested for park or playground areas. On individual lots or parcels, care shall be taken to preserve selected trees to enhance the landscape treatment of the development.
- (3) Natural fertility of the soil shall be preserved by disturbing it as little as possible.
- (4) Open watercourses shall be recognized as community assets. Subdivision design may well be enhanced by featuring streams and brooks.
- (5) No topsoil shall be removed from the site or used as spoil. Topsoil moved during the course of construction shall be redistributed so as to provide at least six inches of cover to all areas of the subdivision and shall be stabilized by seeding or planting.

E. Additional standards.

- (1) Where the property to be subdivided is next to or includes a railroad right-of-way, suitable provisions shall be made for such things as road crossings, screenings and freight access, in recognition of the relationship between the railroad and the subdivision.
- (2) Land subject to periodic or occasional flooding shall not be platted for residential occupancy nor for any other use which may endanger life or property or aggravate the flood hazard.
- (3) No subdivision showing reserved strips controlling access to streets shall be approved, except where the control and disposal of land comprising such strips has been placed in the Township Committee under conditions approved by the Land Use Board.

- (4) Subdivisions that adjoin or include existing streets that do not conform to widths as shown on the Master Plan or Official Map or the street width requirements of this chapter shall dedicate additional width along either one or both sides of the street. If the subdivision is along one side only, 1/2 of the required extra width shall be required to be dedicated.

F. Utility services.

- (1) Standards and procedure.
 - (a) All gas and water mains and all streetlights and lighting standards shall be installed in accordance with the specifications of the lighting agency, utility company or governmental authority or district which has jurisdiction in the area.
 - (b) Electric light and telephone wires and all other utilities shall be underground.
 - (c) A letter approving such a proposed installation, and a statement as to who will carry out the construction, signed by a responsible official of the utility agency, utility company or governmental authority or district which has jurisdiction in the area, shall be directed to the administrative office and shall be received prior to the improvement and utility plans.
 - (d) Every lot created shall be proposed to be served by public water supply and sewage disposal systems or alternate capable of meeting all local, county and state specifications and standards; provided, however, that securing of necessary permits, approvals and/or clearances shall be the responsibility of the developer, and subdivision approval shall convey the approval regarding utility systems proposed by the developer. Lack of such approval may, however, be grounds for disapproval of the application.

G. General rules for street names.

- (1) Definitions of streets. As used herein, the following terms shall have the meanings indicated:

AVENUE, BOULEVARD, DRIVE or ROAD — A collector or arterial street.

COURT, CRESCENT or TERRACE — A loop street which begins and ends on the same street and is not otherwise connected with other streets or a cul-de-sac.

LANE, PATH, STREET or WAY — Short minor residential streets which do not serve as secondary highways or major streets.

PLACE — A street one block long, or a connecting link between two longer streets, and not otherwise a segment of their alignment.

- (2) Continuation of street names. All existing street names shall be extended where proposed streets follow along their alignment.

- (3) Historic or traditional street names. Such names shall be preserved even though the actual street alignment has been changed or the name does not agree with the provisions of this section.
- (4) Duplication of street names. There shall be no duplicate street names within the Township.

§ 298-13. Improvement design standards.

- A. The following improvements will be required, except where this chapter specifically waives the requirement or when the Land Use Board waives the requirement by specific resolution in conjunction with hardship, peculiar situations or special development provisions:
 - (1) Paved streets.
 - (2) Curbs and gutters.
 - (3) Sidewalks.
 - (4) Water mains and fire hydrants.
 - (5) Sanitary waste disposal.
 - (6) Storm drainage.
 - (7) Street signs.
 - (8) Streetlighting.
 - (9) Street and shade trees.
- B. Street design standards. The following minimum standards shall be required for all streets other than county or state roads and highways constructed in Oxford Township:
 - (1) Horizontal alignment. Horizontal alignment shall have:

Standard	Street Class		
	Major Collector (feet)	Minor Collector (feet)	Local (feet)
Minimum center-line radius	600	500	300
Minimum tangent between reverse curves	200	160	120
Intersection radius (curb returns)	40	30	25

Note: Minimum intersection radius shall be determined by the highest street class in the intersection, and the right-of-way line shall be concentric thereto.

(2) Vertical alignment.

(a) Vertical alignment shall have:

- [1] Minimum grade of 0.5%.
- [2] Maximum grade of 6% (8% on local streets).
- [3] Maximum grade for less than 200 feet may exceed Subsection B(2)(a)[2] by 2%.
- [4] Maximum grade within 100 feet (measured from near side curbline) of an intersection of 4%.

(b) All changes in grade shall be connected by vertical curves.

(c) The length (L), in feet, of a vertical curve shall be related to the algebraic difference in the percent of grade (A) and a constant, according to the following formula:

$$L = KA$$

The minimum "K" values shall be as follows:

Street Class	Crest Curve	Sag Curve
Major collector	145	100
Minor collector	65	60
Local	28	35
Intersection (stop conditions)	3	3

(3) Stopping sight distances, based on a height of the driver's eye of 3.75 feet above road surface and a height of the object of 0.5 foot above road surface, shall be at least:

Street Class	Sight Distance (feet)
Major collector	350
Minor collector	275
Local	200

- (4) Street pattern shall conform to the provisions of § 298-12C.
- (5) In regulating subdivisions, these provisions shall be considered the minimum requirements generally consistent with the public welfare; and the Land Use Board, in consultation with the Township Engineer, shall modify or extend these provisions in appropriate cases as may be deemed necessary for the public good. Modifications to these standards shall be based on A Policy on Design of Urban Highways and Arterial Streets, latest edition, published by the American Association of State Highway Officials, or other published basis.
- (6) Standards for all other roads shall be determined by the appropriate authorities.
- (7) Required curbing and construction types for street improvements. Curbing and construction types for street improvements shall be in accordance with the following requirements:
 - (a) Pavement construction shall conform to Chapter 294, Article I, Road Acceptance Specifications, of the Oxford Township Code.
 - (b) Curb construction shall conform to Chapter 294, Article I, Road Acceptance Specifications, of the Oxford Township Code.
 - (c) These provisions shall be considered minimum requirements generally consistent with the public welfare, and the Township Engineer shall modify or extend these provisions in appropriate cases as may be deemed necessary for the public good.

C. General street improvements.

- (1) Driveway aprons.
 - (a) All driveways or other parking areas shall have driveway aprons extending from the curbline to the front property line.
 - (b) Driveway aprons shall be of concrete having a thickness of six inches and shall have widths as follows:

Type of Use	Width (feet)	
	Minimum	Maximum
Residential:		
Single driveway	8	20
Double driveway	16	20
Other	25	40

- (2) Sidewalks.
 - (a) All sidewalks shall be four inches thick and at least four feet wide, constructed of one course of concrete, except that a sidewalk forming part of

a driveway apron shall be six inches thick at grade with abutting sidewalks, and of the same construction material as abutting sidewalks.

- (b) All sidewalks shall be located one foot within the street right-of-way.
- (3) Street signs. Street signs shall be provided by the subdivider conforming to current Township standards.
- (4) Street trees.
 - (a) Street trees shall be provided in all subdivisions.
 - (b) Trees shall be of nursery stock of an approved species, grown under the same climatic conditions as at the location of the development. They shall be of symmetrical growth, free of insect pests and disease, suitable for street use and durable under the maintenance contemplated.
 - (c) The average trunk diameter, measured at a height of six feet above the finished grade level, shall be a minimum of two to three inches, depending on good practice with reference to the particular species to be planted.
 - (d) Trees shall be planted at intervals of from 40 to 60 feet apart (depending upon the species) along both sides of the street and at least 1.5 feet from any sidewalk, curb, gutter or other right-of-way improvement as provided for in this regulation, whether such improvement is proposed to be built or not.
 - (e) All planting shall be done in conformance with good nursery and landscape practice.
- (5) Planting strips. All planting strips within street rights-of-way shall be finish-graded, properly prepared and seeded or sodded with lawn grass in conformance with good nursery and landscape practice.
- (6) Shade trees.
 - (a) Shade trees shall be provided in all subdivisions.
 - (b) Trees shall be of nursery stock of an approved species grown under the same climatic conditions as at the location of the development. They shall be of symmetrical growth, free of insect pests and disease, suitable for residential use and durable under the maintenance contemplated.
 - (c) The average trunk diameter, measured at the height of six feet above the finished grade level, shall be a minimum of one to two inches, depending on good practice with reference to the particular species to be planted.
 - (d) Trees shall be planted on each residential lot at the rate of one tree for each 5,000 square feet of lot area or recreation space, provided that this requirement may be reduced by the number of existing trees retained in good condition on the lot, except that trees within tree rows along the periphery of the lots or tract shall not be included in this determination.

- (7) Monuments shall be provided as described in the Map Filing Law.

D. Utility installations.

(1) Sanitary sewers.

- (a) Sanitary sewers shall be designed in accordance with the current regulations of the New Jersey Department of Environmental Protection and the current construction standards of the Township of Oxford.
- (b) Dry sanitary sewers shall be installed in all subdivisions not connected to a sanitary sewer system.
- (c) All sanitary sewers shall meet the exfiltration standards of the Township.

(2) Fire-protection systems. **[Amended 8-19-1999 by Ord. No. 99-7]**

- (a) For all subdivisions of five or more residential lots (or any subdivision deemed to be a major subdivision), the Land Use Board, in consultation with the Municipal Fire Department, shall require a fire-protection system. For all large subdivisions of 10 or more residential lots, more than one source of fire protection may be necessary. For purposes of this section, the following standards shall apply: **[Amended 10-16-2002 by Ord. No. 2002-14]**

[1] Where public water is not proposed nor available as per the latest capital improvement element of the Master Plan, the subdivider shall, at his or her expense, install a fire-protection system.

[2] Where public water is available within 5,000 feet of the subdivision, a waiver of installing a fire-protection system may be granted by the Land Use Board if the subdivider agrees to install the necessary dry lines to connect the proposed subdivision with the public water system.

[3] Where a fire-protection system is deemed necessary, the following criteria shall apply.

- (b) The term "adequate source of water," for purposes of this section, shall consist of one or more of the following alternatives: underground storage tanks; fire ponds and/or retention basins; lakes or streams or an equivalent natural source of water acceptable to the Land Use Board.

[1] Underground storage tanks for fire-protection purposes shall be constructed of fiberglass or similar noncorrosive material and shall be constructed and installed per the following design criteria:

[a] Minimum of 5,000 gallons.

[b] The top of the tank should be four or more feet underground and shall be installed in accordance with the manufacturer's specifications.

- [c] In areas of high water table, the tank shall be installed with antifloatation footings and straps.
 - [d] The tank shall include an access manhole, an inspection port to measure the water level, venting for 1,500 gallons per minute, discharge suction piping which shall be connected to the bottom of the tank, and a suction hydrant with 4 1/2 N.S.T. threads located at an elevation no higher than 12 feet above the bottom of the tank.
 - [e] All tank locations shall provide for an accessway to the hydrant, in the form of an easement in favor of the Township or other means, that is deemed suitable by the Fire Department for all-weather use.
- [2] Fire ponds and/or retention basins. Fire ponds and/or retention basins for fire protection shall be by the following design criteria:
- [a] A minimum capacity of 20,000 gallons with an average depth of at least five feet. The twenty-thousand-gallon volume excludes both the bottom one-foot depth and top two feet of depth and shall have an impervious bottom.
 - [b] All fire ponds and/or retention basins shall provide for an adequate flow of water during drought conditions.
 - [c] All fire ponds and/or retention basins shall be equipped with a standard suction point with strainer connected to a suction hydrant.
- [3] In the use of lakes and streams, the applicant shall demonstrate conformance with the criteria set forth for fire ponds and/or retention basins.
- (c) Hydrants. The maximum distance from any dwelling unit to a hydrant shall be 400 feet.
- (3) Lighting standards. **[Amended 10-16-2002 by Ord. No. 2002-14]**
- (a) Streetlighting. Streetlighting of a type supplied by the utility and of a type and number approved by the Township Engineer shall be required at all street intersections and along all arterial, collector and local streets and anywhere else deemed necessary for safety reasons. Wherever electric utility installations are required to be underground, the applicant shall provide underground services for streetlighting.
 - (b) Site lighting.
 - [1] All parking areas and walkways thereto and appurtenant passageways, building entrances, loading areas and driveways required for nonresidential or multifamily uses shall be adequately illuminated during the hours of operation which occur after sunset. Any adjacent residential zone or use shall be shielded from the glare of illumination from site lighting and automobile headlights.

- [2] Site lighting shall be provided in all areas accessible to the public in accordance with the following table shown in Figure 1 and Figure 2.⁵
- (c) Lighting plan required for site plan approval. A lighting plan, prepared by the applicant's engineer, shall be provided with all site plan and major subdivision applications. Any outdoor lighting, such as building and sidewalk illumination, driveways with no adjacent parking, the lighting of signs and ornamental lighting, shall be shown on a lighting plan in sufficient detail to allow a determination of the effects upon adjacent properties and traffic safety. The objective of these specifications is to minimize undesirable off-premises effects. No light shall shine into windows or onto streets and driveways in such a manner as to interfere with or distract driver vision. To achieve these requirements, the intensity of such light sources, the light shielding and similar characteristics shall be subject to site plan approval.
- (d) Minimum criteria. All lighting shall be designed to meet the following minimum criteria:
- [1] All lighting from fixtures shall be cut off at property lines adjoining residential areas and zones.
- [2] Fixtures shall provide cutoff so that the lamp or refractor is not visible from adjoining roadways or residential areas. Where lights along property lines, including interior fixtures, would be visible to adjacent residents, the lights shall be appropriately shielded. Such shielding may include berming, landscape material, decorative fencing and, in the case of buildings in excess of two stories or 35 feet, interior window shades or other appropriate treatment that restricts exterior light passage.
- [3] Sky glow effects are prohibited. All fixtures shall incorporate reflectors or refractors to direct lighting to the ground and effectively eliminate undirected spillage.
- [4] Maximum desirable luminaire mounting heights shall be 25 feet, measured from ground level to the center line of the light source or the height of the building, whichever is less.
- [5] A minimum uniformity ratio varying from six to one for the high pedestrian traffic areas to 10 to one for the low pedestrian traffic areas. The uniformity ratio shall be the ratio of the maintained average to minimum intensity.
- (e) Extinguishment of lighting.
- [1] Automatic shutoff or dimming devices shall be required for all parking areas providing 20 or more parking spaces.

5. Editor's Note: Figures 1 and 2 are included at the end of this chapter.

- [2] All exterior lighting, including illuminated signage on commercial and industrial properties, with the exception of illumination required for public safety and security of the property, shall be extinguished within one hour of the close of business or termination of the last working shift at the site.
- [3] With the exception of light sources with twenty-four-hour businesses or those required for public safety and security as determined by the Oxford Police Department, lighting in mixed- or residential-use areas shall be turned off between 11:00 p.m. and 6:00 a.m. in residential- or mixed-use areas. This shall also apply to signage lighting. Provisions shall be made for reduction in the intensity of illumination to the minimum needed for security purposes when a facility is not in operation.
- [4] Exterior floodlights on residential properties under the control of motion/infrared or other detection devices shall not remain illuminated longer than 30 minutes after the cessation of the activity which caused their illumination. Any other exterior floodlights on residential properties shall not remain illuminated after 12:00 midnight.

(f) Design.

- [1] Dimensioned manufacturer's lighting details and specifications, including footcandle distributions and ISO footcandle diagrams, shall be provided. In general, light sources with downward projection and with the lens of the light flush with the fixture housing is preferred. Canopy lights associated with nonresidential uses shall have the light lens flush with the ceiling. All lights shall be concealed-source nonglare lighting and shall be focused downward so that the direct source of light is not visible from adjoining streets or properties. The lens shall be parallel to the ground. Movable fixture housings are prohibited.
 - [2] The style of any light or light standard shall be consistent with the architectural style of the principal building and, where appropriate, the architectural character of the surrounding area.
 - [3] Freestanding lights within parking lots shall be protected to avoid being damaged by vehicles. Where possible, these should be located within landscape islands.
 - [4] Freestanding lights at the perimeter of parking lots shall be aligned with the parking stall striping and located a minimum of 2 1/2 feet to the edge of the curb.
- (4) Other utilities shall be designed to meet the requirements of the operating utility but shall be designed to be served for repair or additional installation without disruption to streets.

E. Drainage system design standards.

(1) Grading and drainage system plan.

- (a) A preliminary grading and drainage system plan shall be a part of the preliminary plat. It shall indicate, in general terms, a proposal for an adequate system of drainage structures to carry off and store or discharge the stormwater runoff and natural drainage water which originates not only within the property boundaries but also that which originates beyond the property boundaries. It should perpetuate existing drainage patterns.
- (b) The public improvement and utilities plan and profiles shall show the final drainage plan, site grading and street profiles.
- (c) No stormwater runoff or natural drainage water shall be so diverted as to overload existing drainage systems or create flooding or the need for additional drainage structures on other private properties or public lands without proper and approved provisions being made for taking care of these conditions. Watersheds with drainage areas over 1/2 square mile come under the jurisdiction of the New Jersey Department of Environmental Protection. Approval of this agency must be secured for any culvert or bridge crossing falling into this category. Copies of any correspondence with the Department of Environmental Protection shall be supplied to the Township Engineer.

(2) Collection system.

- (a) The quantities of water for which the collection system shall be designed shall be in accordance with the rational method of design using the following formula:

$$Q = CIA$$

Where:

Q = The required capacity, in cubic feet per second, for the collection system at the point of design.

A = The tributary drainage area, in acres, and shall include areas tributary from outside sources as well as from within the site itself.

C = The coefficient of runoff applicable to the drainage area and shall be based on consideration of soil conditions, average slope of the drainage area and degree of ultimate development of the area, but in no case shall be less than the following coefficients. These runoff coefficients assume that clay soils (coefficients for sand-gravel soils are indicated in parentheses) are present and that paved areas (parking) have been provided, and any deviation from these factors would result in an adjustment in "C" values.

Determination of nonlisted uses shall be a subject of special study and approved by the Township Engineer.

Usage	Density (units per acre)	Topography		
		Flat (0% - 10%)	Rolling (10% - 20%)	Hilly (over 20%)
Residential				
High-density	4-6	0.50 (0.40)	0.55 (0.45)	0.60 (0.55)
Medium-density	1-4	0.45 (0.35)	0.50 (0.40)	0.55 (0.50)
Low-density	Less than 1	0.40 (0.30)	0.45 (0.35)	0.50 (0.45)
Impervious surfaces		0.90	0.90	0.90
Undeveloped				
Woodland		0.30 (0.20)	0.35 (0.25)	0.50 (0.45)
Pasture and grassed areas		0.30 (0.20)	0.36 (0.20)	0.42 (0.37)
Cultivated fields		0.50 (0.50)	0.60 (0.50)	0.72 (0.62)

I = The rainfall intensity, in inches per hour, and shall be determined from the graph entitled "Rainfall Intensity Duration for Essex and Union Counties," which is made a part hereof and copies of which are on file with the Township Clerk.

[1] The following intensities shall be used to determine "Q":

- [a] Systems carrying roadway drainage: 10 years.
- [b] Crosspipes or culverts carrying runoff from one side of the roadway to the other: 25 years; tributary areas over 20 acres: 50 years.
- [c] At low points and cuts from which water cannot escape without overflowing the roadway: 25 years.

[2] The minimum time of concentration shall be 10 minutes, which shall be used as the initial Tc for all roadway drainage systems.

(b) Pipes or conduits shall be designed using Manning's equation for velocity:

$$V = \frac{1.486 \times R^{2/3} \times S^{1/2}}{n}$$

Where:

R = The hydraulic radius of the conduit flowing full.

n = Manning's roughness coefficient, which shall be as follows. For other materials, "n" shall be as recommended by the Township Engineer.

Type	Coefficient
Concrete pipe	0.012
Corrugated metal, 2 2/3" x 1/2" corrugations	
Plain or fully coated	0.024
Paved invert	0.020
Fully paved	0.012
3" x 1" corrugation	0.027
6" x 2" corrugation (field-bolted)	0.032

S = The slope of the energy gradient, in feet, per foot and shall generally be considered as being the same as the slope of the invert of the pipe (S_o); however, such slopes shall be checked against the available hydraulic gradient whenever the system flows full or where the system discharges into a body of water.

(c) Velocity.

- [1] Wherever possible to ensure a self-cleansing velocity, pipes shall be placed on grades that will provide a minimum velocity of three feet per second when flowing 1/4 full. The following table indicates minimum grades to accomplish this.

Desirable Minimum Gradients for Concrete Pipe

Diameter (inches)	Slope (n = 0.012)
15 (minimum permissible)	0.008
18	0.006
24	0.005
30	0.004
36	0.003
42	0.002
48	0.0016
54	0.0014
60	0.0012
66	0.0011

- [2] Where steep grades are encountered, full-flow velocities over 15 feet per second should be avoided by the use of drop manholes or inlets in the line.

(d) Alignment.

- [1] Manholes or inlets shall be provided in drain lines not more than 350 feet apart and wherever branches are connected or sizes are changed and wherever there is a change in alignment or grade.
- [2] Alignment of pipes shall be in a straight line between manholes or inlets, except that radius pipe may be used in pipes over 60 inches in diameter, provided that a manhole or inlet is incorporated at not more than five-hundred-foot intervals.

(e) Inlet spacing and headwalls.

- [1] Inlet spacing shall be such as to permit a spread of water to the edge of the traveled way, edge of shoulder for rural roads or edge of parking lane (eight feet maximum) for urban roads during a storm with an intensity of three inches per hour. Inlet spacing may vary up to 350 feet, depending on the contributory drainage area and the longitudinal and cross slopes of the roadway. Inlets at intersections shall be located to intercept water before it crosses the intersection or crosswalk area, and inlets shall not be placed in the crosswalk area. Pairs of inlets shall be placed at low points.
- [2] Inlets intercepting swales or in parking areas shall be designed such that not more than six inches (three inches in parking areas) shall pond over an inlet during a storm with an intensity of three inches per hour.
- [3] Pipelines starting or ending in ditches, streams or other bodies of water shall terminate with either a headwall or a flared end section. Riprap or other suitable material shall be provided to prevent erosion.

- (3) Open channel flow. Where brooks, ditches, swales or other channel flows are used, they shall be designed by the use of Manning's equation, as indicated for collection systems above, with the following considerations:

- (a) The friction factor (n) shall be:

Unlined	Friction Factor
Earth, uniform section	0.018 to 0.027
Earth, nonuniform section	0.025 to 0.040
Earth not maintained	0.080 to 0.012

Lined	Friction Factor
Concrete	
Finished	0.015
Rough	0.25
Riprap	0.35

- (b) Design velocities should be limited to a nonerosive velocity and shall be determined based on an analysis of the soil conditions but in any case shall not exceed the following. Velocities shall be controlled by use of check dams or baffles where necessary.

Materials	Velocity (feet per second)
Fine sand to fine loam	2.5 to 3.5
Stiff clay to hardpan	3.75 to 6.00
Concrete-lined ditch	15

- (c) A ditch or brook right-of-way of sufficient minimum width to include a ten-foot access strip in addition to the width of the ditch or brook from bank top to bank top shall be offered for dedication to the Township for drainage purposes. Such right-of-way shall be shown on the drainage plan and on the final plat.
- (d) Swales shall be provided in residential areas so that an area not in excess of the minimum lot area in the subdivision shall drain without being intercepted. This requirement may be varied for wooded sites or pervious soils.
- (e) Swales shall be provided in other areas so that not less than one impervious acre shall drain without being intercepted.
- (f) Jute mesh slope protection shall be used in swales or grassed ditches on gradients exceeding 3%. Paved ditches shall be used where these gradients exceed 10% and significant discharge is expected.
- (g) Side slopes for a drainageway shall be as follows:

Facility	Maximum Side Slope
Channel	2:1
Ditch	4:1
Swale	6:1

- (4) Minimum cover and structural considerations.

- (a) All pipe shall be concrete, unless specific unique design considerations exist for the use of other types of materials, and then only with the approval of the Township Engineer.
 - (b) Minimum cover for reinforced-concrete pipe shall be based upon a depth of cover of two feet from top of pavement to top of pipe.
 - (c) Minimum cover for corrugated-metal pipe shall be based upon a depth of cover of one foot from top of pipe to top of pavement or upon manufacturer's recommendations, whichever is greater.
 - (d) Maximum cover for pipe shall be based on rational analysis through use of Marston's formula. For reference, see the booklet Reinforced Concrete Pipe Culverts, issued by the United States Department of Commerce, and manufacturer's recommendations for flexible pipe.
 - (e) Standard-strength reinforced-concrete pipe shall conform to Class 3, Wall B, and extra-strength reinforced-concrete pipe shall conform to Class 4, Wall B, of ASTM Specifications C-76 or AASHTO Designation M-170. Strengths for corrugated-metal pipe shall be as required by the New Jersey State Highway Department Standard Specifications, current edition and amendments.
 - (f) Box culverts shall be designed in accordance with American Association of State Highway Officials recommendations.
- (5) Design criteria not covered herein.
- (a) Criteria not incorporated herein necessary for design shall be based on recommendations incorporated with Hydraulic Engineering Series circulars published by the Federal Highway Administration and ASCE publication, current edition, and as approved by the Township Engineer.
 - (b) Design methods prepared by the Soil Conservation Service may be used for drainage design with the approval of the Township Engineer.
- F. Construction of improvements. All work shall be done in conformance with the current construction standards of the Township of Oxford or, in lieu thereof, the current edition of the New Jersey State Highway Department Standard Specifications for Road and Bridge Construction, 1961, with amendments and revisions thereto, and with the New Jersey Department of Transportation standard construction details.

ARTICLE V

Enforcement and Administration

§ 298-14. Inspections.

A. Routine inspections.

- (1) All improvements and utilities shall be inspected by the Township Engineer's office to ensure satisfactory completion.

- (2) In no case shall any construction be done without permission from the Township Engineer's office. At least three working days' notice shall be given to the Township Engineer's office prior to any such construction so that a representative of the Township may be present at the time the work is to be done.
 - (3) Prior to the commencement of construction and in February of each succeeding year, the subdivider shall submit a schedule of his operations for the succeeding year to the Township Engineer.
- B. Final inspection. A final inspection of all improvements and utilities will be made to determine whether the work is satisfactory and in substantial agreement with the approved drawings and the Township specifications. The general condition of the site shall also be considered. Upon a satisfactory final inspection report, action will be taken to release the performance guaranty covering such improvements and utilities.

§ 298-15. Guaranties.

- A. As a condition for final plat approval, the Board shall require and accept, in accordance with the standards of this chapter, for the purpose of assuring the installation and maintenance of improvements:
- (1) A performance guaranty in favor of the Municipality in an amount not to exceed 120%, 10% of which shall be in cash, of the cost of installation for improvements if deemed necessary or appropriate, including streets, grading, pavement, gutters, curbs, sidewalks, streetlighting, shade trees, surveyor's monuments, water mains, culverts, storm sewers, sanitary sewers or other means of sewage disposal, drainage structures, erosion control and sedimentation control devices and public improvements of open space.
 - (2) A maintenance guaranty to be posted with the governing body for a period not to exceed two years after final acceptance of the improvement, in an amount not to exceed 15% of the total cost of improvement. In the event that other governmental agencies or public utilities automatically will own the utilities to be installed or the improvements are covered by a performance or maintenance guaranty to another governmental agency, no performance or maintenance guaranty, as the case may be, shall be required by the Municipality for such utilities or improvements.
- B. The form of the guaranty shall be as approved by the Township Attorney, and the amount of the guaranty shall be as determined by the Township Engineer.
- C. The applicant shall assume all liability during construction of such improvements and until such time as the improvements are accepted by the Township of Oxford.
- D. Upon substantial completion of all required appurtenant utility improvements and the connection of the same to the public system, the obligor may notify the governing body, in writing, by certified mail addressed in care of the Municipal Clerk, of the completion or substantial completion of improvements and shall send a copy thereof to the Municipal Engineer. Thereupon, the Municipal Engineer shall inspect all improvements of which such notice has been given and shall file a detailed report, in writing, with the

governing body indicating either approval, partial approval or rejection of such improvements, with a statement of reasons for any rejection. The cost of the improvements as approved or rejected shall be set forth. **[Amended 10-21-1993 by Ord. No. 93-11]**

- E. The governing body shall either approve, partially approve or reject the improvements on the basis of the report of the Municipal Engineer and shall notify the obligor, in writing, by certified mail, of the contents of said report and the action of said approving authority with relation thereto, not later than 65 days after receipt of the notice from the obligor of the completion of the improvements. Where partial approval is granted, the obligor shall be released from all liability pursuant to its performance guaranty, except for that portion adequately sufficient to secure provision of the improvements not yet approved, provided that 30% of the amount of the performance guaranty posted may be retained to ensure completion of all improvements. Failure of the governing body to send or provide such notification to the obligor within 65 days shall be deemed to constitute approval of the improvements, and the obligor and surety, if any, shall be released from all liability pursuant to such performance guaranty for such improvements. **[Amended 10-21-1993 by Ord. No. 93-11]**
- F. If any portion of the required improvements is rejected, the approving authority may require the obligor to complete such improvements, and, upon completion, the same procedure of notification as set forth in Subsections D and E above shall be followed.

§ 298-16. Noncompliance.

Failure to comply with any of the conditions of approval granted as provided in this chapter subsequent to the receipt of a building permit or certificate of occupancy, as the case may be, shall be construed to be a violation of this chapter and shall be grounds for the revocation of any building permit or certificate of occupancy, as the case may be. If the Township Engineer finds that any conditions of approval have not been met, he shall give the applicant 10 days' written notice to comply with said conditions, and failure to comply within this ten-day period shall result in revocation of the building permit or certificate of occupancy, as the case may be. Such violations may additionally or singly also be prosecuted under § 298-17.⁶

§ 298-17. Violations and penalties. [Amended 10-21-1993 by Ord. No. 93-11']

If, before final subdivision approval has been granted, any person, as owner or agent, transfers or sells or agrees to transfer or sell any land which forms a part of a subdivision for which municipal approval is required in accordance with the provisions of this chapter, except pursuant to an agreement expressly conditioned on final subdivision approval, such person shall be subject to the requirements of N.J.S.A. 40:55D-55.

6. Editor's Note: Former § 83-19, Fees, which previously followed this section, as amended 10-19-1989 by Ord. No. 89-9, was repealed 10-15-1992 by Ord. No. 92-6. See now Ch. 51, Land Use Procedures, Schedule I, Fees.

7. Editor's Note: Amended at time of adoption of Code (see Ch. 1, General Provisions, Art. I).

SUBDIVISION OF LAND

298 Attachment 1

Township of Oxford

Figure 1
Lighting Standards for Outdoor Parking Facilities⁵

Level of Activity ¹	General Parking and Pedestrian Area	Vehicle Use Area (only)
	Footcandles (minimum on pavement) ²	Footcandles (average on pavement) ³
High	0.9	2.0
Medium	0.6	1.0
Low ⁴	0.2	0.5

NOTES:

¹ Levels of activity are defined by IES as follows:

- | | |
|------------------------|---|
| High Activity Levels | a. Major regional shopping centers or malls.
b. Major league athletic stadiums and arenas. Major cultural civic facilities such as museums, art galleries, etc.
c. Convention centers and parking for major political rallies and concerts.
d. Fast-foot franchises. |
| Medium Activity Levels | a. Community shopping centers or strip malls.
b. Hospital parking areas. Transportation parking, (airports, rail terminals, bus terminals).
c. Area cultural, civic or recreational events. Local sports facilities, residential complex parking, apartment parking, condominium parking. Office complex parking. |
| Low Activity Levels | a. Local merchant parking.
b. Industrial employee parking.
c. Educational facility parking. Church parking. |

If the levels of nighttime activity involve a large number of vehicles, the examples above for low and medium activities properly belong in the next higher level.

² Minimum levels on pavement.

³ Average maintained levels on pavement.

⁴ This recommendation is based on the requirements to maintain security at any time in areas where this is a low level of nighttime activity.

⁵ Intersections and other areas not specifically identified shall be governed by the IES Lighting Handbook for standards. (IES) – Illumination Engineering Society of North America, Lighting Handbook: Reference and Application, 8th Edition (New York: IES, 1993 or more-current edition.)

SUBDIVISION OF LAND

298 Attachment 2

Township of Oxford

Figure 2
Pedestrianway Lighting Standards⁵

Walkway Classification	Minimum Average Level¹ (footcandles)	Minimum Maintained Levels for Special Pedestrian Security² (footcandles)
Sidewalks (roadside and Type A bikeways ³)		
Commercial areas	1.0	2.0
Intermediate areas	0.6	1.0
Residential areas	0.2	0.5
Walkways distant from roadways and Type B bikeways ⁴		
Park walkways, bikeways and stairways	0.5	0.5
Pedestrian tunnels	4.0	5.0
Pedestrian overpasses	0.3	0.4

NOTES:

Crosswalks traversing roadways in the middle of long blocks and at street intersections should be provided with additional illumination.

¹ Average to minimum uniformity ratios where special security is not essential should not exceed four to one, except for residential sidewalks and Type A bikeways in residential areas, where a ratio of 10 to one is acceptable.

² Where increased pedestrian security is desirable, the uniformity ratio should not exceed five to one for any walkway or bikeway.

³ Type A: designated bicycle lane. A portion of roadway or shoulder that has been designated for use by bicyclists. It is distinguished from the portion of the roadway for motor vehicle traffic by a paint stripe, curb or other similar devise.

⁴ Type B: bicycle trail. A separate trail or path from which motor vehicles are prohibited and which is for the exclusive use of bicyclists or the shared use of bicyclists and pedestrians. Where such a trail or path forms part of a highway, it is separated from the roadways for the motor vehicle traffic by an open space or barrier.

⁵ Intersections and other areas not specifically identified shall be governed by the IES Lighting Handbook for standards. (IES) – Illumination Engineering Society of North America, Lighting Handbook: Reference and Application, 8th Edition. (New York: IES, 1993 or most-current edition)